

REMARKS

The Examiner has required an election in the present application between:

Species I: An ink cartridge satisfying $200 \leq N \cdot R \leq 320$ (where $M=N \cdot R$);

Species II: An ink cartridge satisfying $T \cdot N \cdot R \cdot B \geq 0.08$;

Species III: An ink cartridge satisfying $T \cdot N \cdot R \cdot B \geq \gamma \cdot h$;

Species IV: An ink cartridge satisfying $C \cdot \{\mu \cdot L \cdot Q \cdot (N \cdot R)^2 / S\} \leq T / D$;

Species V: An ink cartridge satisfying $\{k/A\} \cdot Q \cdot (N \cdot R)^2 \cdot (\mu \cdot L) / S \leq 2000$;

Species VI: An ink cartridge satisfying $Q \cdot M^2 \cdot (\mu \cdot L) \cdot C / S \leq T / D$; and

Species VII: An ink cartridge satisfying $\{T \cdot S / (C \cdot D \cdot \mu \cdot L \cdot Q)\}^{0.5} \geq (N \cdot R) \geq \gamma \cdot h / (T \cdot B)$.

For the purpose of examination of the present application, Applicants elect Species IV, with traverse.

Claim(s) 4 and 16 are directed to the elected species.

In reply to the Examiner's indication that Applicants must elect a single disclosed species for prosecution on the merits, and without agreeing with the Examiner's characterization of the claimed subject matter, Applicants hereby elect Species IV. Claims 4 and 16 are readable on Species IV. Applicants respectfully reserve the right to file one or more divisional applications for non-elected subject matter.

Applicants respectfully request the Examiner reconsider the outstanding restriction. Species IV through VII (claims 4, 5, 9, 10, 11, 12, 16, 17, 21, 22, 23, and 24) satisfy the condition for not causing depletion of the ink at a maximum amount of ejected ink Q (m^3/s) and therefore are of the same species.

More specifically, claim 4 relates to Expression (17) obtained from a combination of the expression (6) and (8').

$$\Delta P = (k/A) \cdot \{\mu \cdot L \cdot (N \cdot R)^2 / S\} \cdot Q \quad \dots(6)$$

$$P_n \approx 4 \cdot T/H \quad \dots(8')$$

$$C \cdot \{\mu \cdot L \cdot Q \cdot (N \cdot R)^2 / S\} \leq T/D \quad \dots(17)$$

Claim 5 relates to Expression (21) obtained from a combination of Expression (6) and a stable condition, 2.0kPa.

$$(k/A) \cdot \{\mu \cdot L \cdot Q \cdot (N \cdot R)^2 / S\} \leq 2000 \quad \dots(21)$$

Claim 9 relates to the Expression (18) obtained by replacing N·R, product of cell density and compressibility, with actual cell density M that is substantially the same as N·R in the Expression (17) obtained from a combination of Expressions (6) and (8').

$$C \cdot \{\mu \cdot L \cdot Q \cdot M^2 / S\} \leq T/D \quad \dots(18)$$

Claim 11 relates to the Expression obtained from a combination of the following Expression (10) and the Expression (17') obtained by rearranging in such a manner that both sides of the Expression (17), obtained from a combination of the Expressions (6) and (8'), are multiplied by $(N \cdot R)^2 / (T/D)$, and both sides of the obtained expression are raised to the 0.5th power.

$$\{T \cdot S / (C \cdot D \cdot \mu \cdot L \cdot Q)\}^{0.5} \geq N \cdot R \quad \dots(17')$$

$$T \cdot N \cdot R \cdot B \geq \gamma \cdot h \quad \dots(10)$$

Claim 12 relates to the Expression obtained by replacing N·R, product of cell density and compressibility, with actual cell density M that is substantially the same as N·R in the Expression of claim 11.

As such, all of species IV through VII (claims 4, 5, 9, 10, 11, and 12) can be expanded from Expression (6) and therefore are the same species.

Claims 4, 5, 9, 10, 11, and 12 relate to an ink cartridge. Claims 16, 17, 21, 22, 23, and 24 relate to an image forming apparatus comprising the same ink cartridge. As such, claims 16, 17, 21, 22, 23, and 24 are the same species as claims 4, 5, 9, 10, 11, and 12.

As such, Applicants respectfully request the Examiner consider all of claims 4, 5, 9, 10, 11, 12, 16, 17, 21, 22, 23, and 24 in this application.

The Examiner objected to claim 14. However, by this amendment, Applicants have not elected claim 14 and, as such, it is respectfully requested that the outstanding objection be withdrawn.

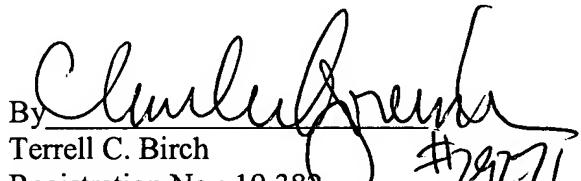
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Catherine M. Voisinet, Registration No. 52,327, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

- Attached is a Petition for Extension of Time.
- Attached hereto is the fee transmittal listing the required fees.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

Dated: June 3, 2005

Respectfully submitted,

By 
Terrell C. Birch #29271
Registration No.: 19,382
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Rd
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicants